Amendments to Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (currently amended): A device for an optical communication network comprising:

a first tunable edge filter that is adapted to receive an input signal and to drop a first range of channels in the input signal; ~~and~~

a second tunable edge filter that is adapted to receive a dropped signal from the first tunable edge filter and that is adapted to drop a second range of channels from the dropped signal from the first tunable edge filter, such that an intersection between the first range of channels and the second range of channels defines a tunable passband for the device; and

a third tunable edge filter that is adapted to receive a first rejected signal from the first tunable edge filter and a second rejected signal from the second tunable edge filter and to create an output signal that includes channels not in the tunable passband for the device.

Claim 2 (original): The device of claim 1 wherein the tunable edge filters are bandpass filters with a wide passband having a rising or falling edge that lies outside an operating spectrum for the device.

Claim 3 (original): The device of claim 1 wherein the tunable edge filters are high or low pass filters.

Claim 4-6 (cancelled).

Claim 7 (original): The device of claim 1 wherein the tunable edge filters further comprise components selected from a group comprising Fabry-Perot interferometers, bulk

diffraction gratings, fiber Bragg gratings, planar lightwave circuits, arrayed waveguide gratings, thin film interference, and Mach-Zender interferometers.

Claim 8 (original): The device of claim 1 wherein the signals are wavelength division multiplexing signals.

Claim 9-14 (cancelled).

Claim 15 (currently amended): A method for filtering an optical communication signal comprising:

receiving an input signal;

dropping a first range of channels in the input signal using a first tunable edge filter; ~~and~~

dropping a second range of channels from a signal comprising the first range of channels dropped from the first tunable edge filter using a second tunable edge filter, such that an intersection between the first range of channels and the second range of channels defines a tunable passband; and

combining a first rejected signal from the first tunable filter and a second rejected signal from the second tunable edge filter, thereby creating a third rejected signal that includes channels not in the tunable passband.

Claim 16 (cancelled).

Claim 17 (original): The device of claim 15 wherein the signals are wavelength division multiplexing signals.

Claim 18 (cancelled).

Claim 19 (currently amended): A ~~The~~ device for an optical communication network ~~of claim 18 further~~ comprising

a diffraction grating that receives an input signal and creates a spectrally dispersed signal;

a pair of shutters that selectively block portions of the spectrally dispersed signal so as to define a tunable passband for the device;

a mirror which directs portions of the spectrally dispersed signal not blocked by the pair of shutters back along a reverse path to the diffraction grating which recreates an output signal missing channels that were in the blocked portions of the spectrally dispersed signal; and

a circulator which directs the output signal to a drop port.

Claim 20 (original): The device of claim 19 wherein the signals are wavelength division multiplexing signals.

Claim 21 (new): A device for an optical communication network comprising:

a first tunable edge filter that is adapted to receive an input signal and to drop a first range of channels in the input signal; and

a second tunable edge filter that is adapted to receive a dropped signal from the first tunable edge filter and that is adapted to drop a second range of channels from the dropped signal from the first tunable edge filter, such that an intersection between the first range of channels and the second range of channels defines a tunable passband for the device; and

a combiner that is adapted to receive a first rejected signal from the first tunable edge filter and a second rejected signal from the second tunable edge filter and combine the first and second rejected signals to create an output signal that includes channels not in the tunable passband for the device.

Claim 22 (new): The device of claim 21 wherein the combiner is a coupler.

Claim 23 (new): The device of claim 21 wherein the tunable edge filters are bandpass filters with a wide passband having a rising or falling edge that lies outside an operating spectrum for the device.

Claim 24 (new): The device of claim 21 wherein the tunable edge filters are high or low pass filters.

Claim 25 (new): The device of claim 21 wherein the tunable edge filters further comprise components selected from a group comprising Fabry-Perot interferometers, bulk diffraction gratings, fiber Bragg gratings, planar lightwave circuits, arrayed waveguide gratings, thin film interference, and Mach-Zender interferometers.

Claim 26 (new): The device of claim 21 wherein the signals are wavelength division multiplexing signals.

Claim 27 (new) A method for filtering an optical communication signal comprising:

receiving an input signal;

dropping a first range of channels in the input signal using a first tunable edge filter; and

dropping a second range of channels from a signal comprising the first range of channels dropped from the first tunable edge filter using a second tunable edge filter, such that an intersection between the first range of channels and the second range of channels defines a tunable passband, wherein the signals are wavelength division multiplexing signals.